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*m.s.A*

AN  
INAUGURAL DISSERTATION  
ON THE  
*CHOLERA MORBUS.*

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SUBMITTED TO THE PUBLIC EXAMINATION  
OF THE  
FACULTY OF PHYSIC,  
UNDER THE AUTHORITY OF THE  
TRUSTEES OF COLUMBIA COLLEGE,  
IN THE  
STATE OF NEW-YORK,

WILLIAM SAMUEL JOHNSON, LL. D. President;

FOR THE DEGREE OF  
DOCTOR OF PHYSIC,  
ON THE SIXTH DAY OF MAY, 1794.

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By HENRY MEAD,  
Citizen of the State of Connecticut,

LIBRARY

Such, such is life, the mark of misery, plac'd  
Between two worlds, the future and the past;  
To time, to sickness, and to death a prey,  
It sinks, the frail possession of a day.

Washington  
JOHNSON.

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TO THE

Rev. ISAAC LEWIS, D. D.

*Greenwich, Connecticut;*

Please to accept this, as a mark of esteem and friendship,

From your most obliged and humble servant,

The AUTHOR.

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T O

MALACHI TREAT,  
PHYSICIAN;

AND

JOHN R. B. RODGERS, M.D  
PROFESSOR OF MIDWIFERY  
IN COLUMBIA COLLEGE;

*This DISSERTATION*

Is most respectfully inscribed, by their obliged and indebted  
Friend and Pupil,

The AUTHOR

WATERCOLORS  
BY GENE

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A

D I S S E R T A T I O N  
ON THE  
*CHOLERA MORBUS.*

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**T**HREE is no disease, perhaps, more alarming, or which requires the more immediate assistance of the Physician, than *Cholera*: this circumstance, together with the frequency of its occurrence in this climate, makes it a fit subject for careful attention and accurate investigation. From the rapid progress of the disease, and the extreme debility it produces, it frequently terminates in death in the short space of twenty-four hours, and medicine, unless administered in the early stages, will often prove ineffectual.

When

When I reflect on the diversity of opinions that have been offered respecting the causes of cholera, and consider, that the more aged and experienced in medicine have differed much on this subject, I feel a reluctance in hazarding an opinion, and in offering the following pages to public view; but, the laws of this College make it my duty, and my dependance on the candor of the reader will induce him to view this as my first sacrifice on the Altar of Science.

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## History and Definition.

THIS disease is said to be confined mostly to hot climates and warm seasons. Dr. SYDENHAM observes, that it happened most frequently in England : the month of August, but that it appeared sometimes toward the close of summer, when the weather was unusually warm. Sir CLIFTON WINTRINGHAM asserts, that he has seen it occurring in all seasons of the year, but that it happened most frequently when the weather was the warmest, and the vicissitudes the greatest

greatest in the same day. In this climate it is generally the most prevalent in the months of July and August; but it does not appear to be wholly and altogether confined to this season, for it sometimes happens at any season of the year, or whenever the weather is unusually warm, as has been observed above: neither do we find it confined to any particular age or constitution, but the bilious and relaxed, and particularly children, are the most frequent subjects of this disease. It is likewise observed, that the passionate are very often attacked with the cholera. The most distinguishing marks of this disease are, a frequent vomiting and purging of a large quantity of bilious matter, which puts on different appearances at different stages. Dr. Cullen thus defines it: "Humoris biliosi vomitus, ius-  
" "dem simul dejectio frequens, anxietas tormina  
" "surarum spasmoda." This he places in the class of *Neuroses*, and order *Spasmi*. The first evacuations consist of the usual contents of the stomach, which soon become of a greenish colour, and towards the close of the disease more like the natural appearance of the bile. If the symptoms are violent, they often change to a

bloody and dark appearance, and are said by some to look like the washings of flesh; but for the most part they consist of an unusual quantity of bile through the whole course of the disease. The patient is first attacked with a disagreeable sensation about the region of the stomach, considerable anxiety and *oppression*, a flatulent distension and gripping pains of the abdomen: a nausea, vomiting and purging soon succeed, which, as the disease advances, are attended with a spasmodic affection of the abdominal muscles, that frequently extended to the extremities and other parts of the body, particularly to the calves of the legs: the abdomen now becomes sore and painful to the touch, the patient is very restless, the pulse is small, irregular, and at times scarcely perceptible, attended with a difficulty of breathing. The extremities grow cold, a cold foetid sweat breaks out, the countenance becomes pale, hoarseness and convulsions soon succeed, and, if left to nature, death will soon close the scene.

There appears to be but little if any pyrexia attending this disease, unless protracted for several days; the hurried, irregular pulse, and difficult respiration,

respiration, are owing to the spasmodic affection and irritability of the system. The symptoms of this disease are so well marked, and so evident in all its stages, that I am disposed to think the above description will be sufficient to distinguish it from any other.

Dr. CULLEN divides cholera into two species; the one, spontaneous, and arising in warm seasons without any manifest cause; the other, accidental, or when arising from any poisonous matter taken into the stomach. The causes of the latter are too evident to need any further investigation; but the former, which we are now to consider, I shall endeavour to describe according to the idea I have been able to form of its nature and distinction.

In order, then, to a more intimate knowledge of this disease, and for the purpose of effecting a speedy and safe cure, it will be first necessary to pay some attention to its causes.

## Causes.

THE liver is an organ of such importance to the animal œconomy, that any alteration from its healthy action, or secretion, has given rise to some of the most obstinate and alarming diseases to which the human race is subjected; but the little knowledge we have of glandular secretion renders the causes of such diseases intricate and obscure; and as cholera mostly arises from this source, I shall only attempt a few remarks, according to the most received opinions.

The causes of this disease may be divided into proximate, and remote; the latter comprehending the predisponent, and occasional or exciting causes.

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### Predisponent Causes.

PREDISPOSITION is said to be that state of the body which favours the operation of other causes in producing disease. Any thing, then, that will tend to relax and debilitate the system, may be considered among the predisponent

nent causes of cholera; and since it is almost entirely confined to warm seasons and hot climates, and since Physicians, ancient as well as modern, unanimously agree, that such climates and seasons are the most productive of all bilious diseases, and as the cholera is more or less dangerous in proportion to the previous degree of heat, we must consider this as one of the most frequent predisponent causes. The unwholesome effluvia which fills the atmosphere of large towns and cities, produces great predisposition, as we see from the frequent occurrence of the disease in those places. Dr. RUSH, when speaking of that kind of cholera which affects children, observes how extremely agreeable it is to see the little sufferers revive as soon as they escape from the city "to inspire the pure air of the country."\* From the above circumstance it appears, that these are the general predisponent causes of this disease; and the application of sudden cold (especially if combined with moisture) to the system, thus predisposed, acts as an exciting cause. Much has been said of acidity and the summer fruits, as an exciting cause of this disease; and what has given

\* See Rush on the subject of Cholera.

given rise to the supposition is, there being so frequently an acid in the stomach, and the matter evacuated often of an acid nature. But this, I believe, is rather an accidental symptom, which arises from the relaxation and debility of the digestive organs, always happening previous to an attack of the cholera, when, being rendered incapable of performing their usual office, digestion is impeded; and we may readily conceive why acidity, and other crudities in the stomach and intestines, so often accompany this disease. From these circumstances I am inclined to believe that acidity may be a frequent attendant on cholera. But as the disease has very often happened independent of this, and without any previous change or error in diet, or in the manner of life, that could be observed,\* and even in those that have lived entirely upon flesh, I am disposed to doubt that it ever acts as an exciting cause;† and whenever it does happen, it may, with more propriety, be considered only as producing greater predisposition.

Proximate

\* Cullen's First Lines.

† See the second volume of Medical Comment. where there is an objection to the summer fruits ever producing this disease.

## Proximate Cause.

NOTWITHSTANDING the proximate causes of diseases in general have been involved in so much obscurity, and have so often baffled the most laborious studies of man, there are none, perhaps, more evident than that of cholera. It being mostly confined to the stomach and intestines, and more especially to the duodenum, and the almost constant effusion of a bilious matter, ~~quæcunq[ue] version~~ are convincing proofs that the disease depends upon an increased secretion of bile, and by its stimulating and acrid quality, irritates the internal surface of the stomach and intestines; thus producing all the disagreeable symptoms described above. Whether its acridity arises from any alteration in its properties, or whether the disease is produced merely from an increased quantity, is of little consequence; I believe, however, it may arise from either source. By the experiments of ARNAULD and MONRO <sup>1760</sup> the emetic qualities of the bile in its natural state, an increase in quantity will prove a sufficient cause; and

and hot climates and warm seasons being so favourable to the production of bile, it may be secreted in larger quantities than usual, and thus be a frequent cause of cholera; and there is not the least doubt, but the bile frequently undergoes some change; particularly when obstructions happen in the biliary ducts, it becomes stagnant, and there accumulating in considerable quantities, increases in offensiveness, and grows more acrid and more productive of disease.

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## Prognosis.

As there is nothing more pleasing to the Physician, than when, from the appearance of the disease, he can prognosticate a favourable termination, it will be necessary to pay some attention to the most distinguishing marks that may lead us to the true prognosis of cholera. This is mostly to be known from the violence of the symptoms. If, in the beginning, the vomiting and purging have no intermission, but constantly alternate with each other, together with violent spasmodic

spasmodic affections of the whole system; if the pulse become small, irregular, and at times scarce perceptible, with a difficulty of breathing, hiccough, and frequent convulsions, attended with a cold foetid sweat, and a discharge of blackish or bloody matter, we may, with some degree of assurance, say that death will soon close the scene. On the contrary, if the above symptoms put on a mild appearance, if the intermissions are long enough to give the medicine time to produce its effect before it is rejected, and a free and natural perspiration takes place, and if violent spasm and convulsions do not intervene, the offending matter will soon become less irritating to the stomach and intestines; and, with a degree of pleasure both to ourselves and patient, we may, from their symptoms, prognosticate a favourable termination.

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## Method of Cure.

A TRUE and intimate knowledge of the causes of a disease is of so much importance in

its cure, that without it we are often induced to commit the grossest errors, and instead of removing, frequently aggravate every symptom. This has often been the case in the cure of cholera, when the whole alimentary canal being in the highest state of irritation, and every appearance of approaching death, the use of emetics and cathartics has been prescribed, but generally with an ill effect: Yet, as the causes of this disease are now better understood, we may proceed to its cure with more safety; the above description, and the most successful practice, pointing out the following indications, which ought to be kept in view; viz.

1. To dilute and correct the offending matter.
2. To allay the irritation and spasmodic affection; and,
3. To restore the tone of the system and obviate the remote causes.

To answer our first intention, nothing has been found more serviceable than the free and liberal exhibition of some tepid drinks, such as the camomile tea, or infusion; barley water, and

and most of the animal broths, when made thin, answer a very good purpose. If these last cannot be obtained, or while they are preparing, we may have recourse to plain water made a little warm. These may be drank very freely, and in large draughts, frequently repeated. Dr. DOUGLASS highly recommends the bread-water: he prepares it in the following manner: "Take any quantity of oat-bread, baked without yeast or leaven; let it be carefully toasted brown, but not burnt; pour on it as much water as will give it the colour of common coffee; let the patient drink of this very freely, which they do with eagerness, as they are generally thirsty; and always affirm it is most grateful to their stomachs." He observes, that he has always used oat-bread; but where this cannot be had, he doubts not but wheat-bread or flour well toasted may do; but, if the stools become acrid, with frequent tormina, any of the above prescriptions may be made into an injection, and thrown up after each evacuation, together with a few dr. the thebaic tincture. The exhibition of good porter will frequently check the vomiting, and give not only an agreeable remedy, but a very efficacious

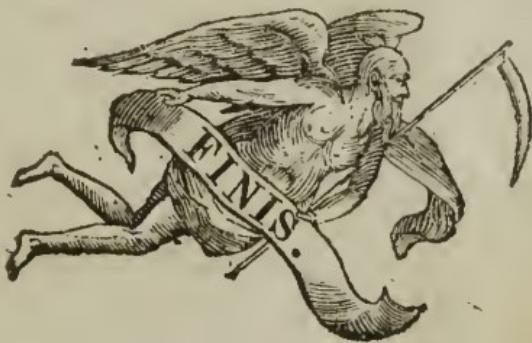
efficacious restorative. Alkaline salts, when given in lime-juice, while in the act of effervescence, have been found very serviceable; likewise, in allaying the vomiting, the ~~spirits mundire~~ are also given with the same intention. If the presence of an acid in the stomach should prove troublesome, we must endeavour to correct it by administering some of the alkalies or absorbents. The alkaline salts may be given for this purpose, either in solution or in bolus; but, from their disagreeable taste, they are not so well retained as magnesia joined with mint-water, a little lavender compound, and a few drops of thebaic tincture. If the spasmodic affection and irritability of the system become severe, we must have recourse to our second indication; and the best and most powerful medicine to answer this purpose, is opium; it seems not only to act here as an anti-spasmodic, but is very serviceable in almost every stage of this disease. The celebrated Dr MEAD calls it the *magnum donum Dei.* The best mode of administering it is in the form of the thebaic tincture, in a dose, according to the age and constitution of the patient, joined with

with any of the foregoing medicines, or by itself. Dr. SYDENHAM tells us, that this is the last refuge to which we can have recourse in this disease. He says it should not only be given during the urgency of the symptoms, but continued for some days after the vomiting and looseness are gone off, until the patient recovers his former health and strength.—There are several more anti-spasmodics which might prove serviceable here, but this, together with pediluvium and some warm fomentations to the region of the stomach and other parts of the body, will generally answer all our purposes. If, by these means, we prove successful enough to stop the vomiting and tormina, the most violent symptoms, we must then endeavour to restore tone of the system and prevent a recurrence of the disease. To effect this, we may have recourse to all those medicines called tonics, such as bitters, and many of the astringents; among these we may rank allum, which acts as a pure tonic, without exciting any stimulant effects. It is certainly a very powerful remedy. Tincture of allum, either in infusion or in powder, is a

cellent tonic, and has been known powerfully to co-operate with laudanum in allaying both the vomiting and tormina. The Peruvian bark is a very good tonic; it may be given in the various forms of decoction, infusion, or in substance. To these we may add the use of good old Medaira, or sound Port Wine, with the fresh and wholesome air of the country. The diet should be cordial and nourishing; the meat should be roasted or broiled, the patient should not overload his stomach, but eat a little and often, and use gentle exercise.

Having finished the subject of this dissertation, I trust the reader will meet with no disappointment in want of novelty. So much has already been laid on this, as well as on almost every other medical subject, by persons of eminence, that nothing new can be expected from a young and diffident candidate.—Should the observations which have been made be found to agree with the received opinions, and to answer the purpose for which they were intended, my wishes are amply accomplished, and I shall ever retain

tain a sense of the greatest obligation to those gentlemen under whose auspices my medical pursuits have been conducted.





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